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"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

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For the American Farmer.

The following article is extracted from a very extensive treatise on the "Theory and Practice of Landscape Gardening," by A. J. Downing, of Newburg, N. Y.; a work which will repay the reader of it, as it is replete with general information on the subject of buildings, as well as the arrangement of the grounds contiguous to dwellings in the country. It is my purpose to give several extracts from it, the first of which relates to "The Transplanting of fruit trees—Reasons for frequent failures in removing large trees—directions for performing this operation—selection of subjects—preparing trees for removal—transplanting evergreens."

"There is no subject on which the professional horticulturist is more frequently consulted in America, than transplanting trees. And, as it is an essential branch of Landscape Gardening, indeed perhaps the most important and necessary one to be practically understood in the improvement or embelishment of new country residences, we shall offer a few remarks here, with the hope of rendering it a more easy and successful practice in the hands of amateurs.

Although there are great numbers of acres of beautiful woods and groves, the natural growth of the soil in most of the older states, yet a considerable portion of our ordinary country seats are meagerly clothed with trees, while many beautiful sites for residences have in past years been so denuded, that the nakedness of their appearance constitutes a serious objection to them as places of residence. To be able, therefore, to transplant from natural copses, trees of ten or twelve years growth, is so universally a desideratum, that great numbers of experiments are made annually with this view; though few persons succeed in obtaining what they desire, viz: the immediate effect of wood; partly from the want of knowledge of the nature of vegetable physiology, and partly from mal-practice in the operation of removal itself.

When the admirable written "Planter's Guide," by Sir Henry Steuart, made its appearance some ten years ago, not only describing minutely the whole theory of transplanting nearly full grown trees, but placing before its readers a report of a committee of the Highland Society of Edinburg attesting the complete success of the practice, as exemplified in the woods, copses and groups, which, removed by the transplanting machine, beautified with their verdure and luxuriance the Baronet's own park, the whole matter of transplanting was apparently cleared up, and numbers of individuals in this country with sanguine hopes of success set about the removal of large forest trees.

Of the numerous trials made upon this method with *trees of extra size*, we have known but a very few instances of even tolerable success. This is no doubt owing partly to the want of care and skill in the practical part of the process, but mainly to the ungenial nature of our climate.

The climate of Scotland during four-fifths of the year, is in some respects the exact opposite of that of the U. States, An atmosphere which for full nine months of the twelve, is copiously charged with fogs, mists and dampness, may undoubtedly be considered as the most favorable in the world for restoring the weakened or impaired vital action of large transplanted trees. In this country, on the contrary, the dry atmosphere and constant evaporation under the brilliant sun of our summers, are most important obstacles with which the transplanter has to contend, and which renders complete success so much more difficult here than in Scotland. And we would therefore rarely attempt in this country the extensive removal of trees larger than twenty feet in height. When of the size of fifteen feet they are sufficiently large to produce very considerable immediate effect, while they are not so large as to be costly or very difficult to remove, or to suffer greatly by the change of position like older ones.

The greatest want of success in transplanting trees of moderate size in this country arises, as we conceive, mainly from two causes; the first, a want of skill in performing the operation, arising chiefly from ignorance of the nature of the vital action of plants, in roots, branches, etc.; and the second, a bad or improper selection of subjects on which the operation is to be performed. Either of these causes would account for bad success in removals; and where, as is frequently the case, both are combined, total failure can scarcely be a matter of surprise to those really familiar with the matter.

An uninformed spectator who should witness for the first time the removal of a forest tree, as ordinarily performed by many persons, would scarcely suppose that any thing beyond mere *physical strength* was required. Commencing as near the tree as possible, cutting off many of the roots, with the very smallest degree of reluctance, wrenching the remaining mass out of their bed as speedily and almost as roughly as possible, the operator hastens to complete his destructive process by cutting off the best part of the head of the tree, to make it correspond with the reduced state of the roots. Arrived at the hole prepared for its reception, his replanting consists in shoveling in, while the tree is held upright, the surrounding soil, paying little or no regard to filling up all the small interstices among the roots,—and finally, after treading the earth as hard as possible, completing the whole by pouring two or three pails of water upon the top of the ground. How any reflecting person, who looks upon a plant as a delicately organized individual, can reasonably expect or hope for success after such treatment in transplanting, is what we never could fully understand! And it has always, therefore, appeared pretty evident, that all such operators must have very crude and imperfect notions of vegetable physiology, or the structure and functions of plants.

The first and most important consideration in trasplanting should be the *preservation of the roots.* By this we do not mean a certain bulk of the large and more important ones only, but as far as possible all the numerous small fibres and rootlets so indispensably necessary in assisting the tree to recover from the shock of removal. The coarser and larger roots serve to secure the tree in its position and convey the fluids, but it is by means of the small fibrous roots, or the delicate and numerous *points* of these fibres called *spongioles*, that the food of plants is imbibed, and the destruction of such is, therefore, in the highest degree fatal to the success of the transplanted tree. To avoid this as far as practicable, we should, in removing a tree, commence at such a distance as to include a circumference large enough to comprise the great majority of the roots. At that distance from the trunk we shall find most of the smaller roots, which should be carefully loosened from the soil, with as little injury as possible; the earth should be gently and gradually removed from the large roots, as we proceed onward from the extremity of the circle to the centre, and when we reach the nucleus of roots surrounding the trunk, and fairly undermine the whole, we shall find ourselves in possession of a tree in such a perfect condition, that even when of considerable size, we may confidently hope for a speedy recovery of its former luxuriance after being planted.

Now to remove a tree in this manner, requires not only a considerable degree of experience, which is only to be acquired by practice, but also much *patience* and *perseverance* while engaged in the work. It is not a difficult task to remove, in a careless manner four or five trees in a day, of fifteen feet in height, by the assistance of three or four men and proper implements of removal; while one or two trees only can be removed if the roots and branches are preserved entire or nearly so. Yet in the latter case, if the work be well performed, we shall have the satisfaction of beholding the subjects, when removed, soon taking fresh root, and becoming vigorous healthy trees with fine luxuriant heads; while three fourths of the former will most probably perish, and the remainder struggle for several years under the loss of so large a portion of their roots and branches before they entirely recover and put on the appearance of handsome trees.

When a tree is carelessly transplanted, and the roots much mutilated, the operator feels obliged to reduce the top accordingly; as experience teaches him, that although the leaves may expand, yet they will soon perish without a fresh supply of food from the roots;—but when the largest portion of the roots are carefully taken up with the tree, pruning may be nearly or entirely dispensed with, and thus the original symmetry and beauty of the head retained. When this is the case the leaves contribute as much, by their pecular action in elaborating the sap, towards re-establishing the tree as the roots; and indeed the two act so reciprocally with each other, that any considerable injury to the one, always affects the other. "The functions of respiration, perspiration, and digestion," says Professor Lindley, "which are the peculiar offices of leaves, are essential to the health of a plant: its healthiness being in proportion to the degree in which these functions are performed; the leaf is in reality a natural contrivance for exposing a large surface to the influence of external agents, by whose assistance the crude sap contained in the stem is altered and rendered suitable to the particular wants of the species, and for returning into the general circulation the fluids in their matured condition. In a word, the leaf of a plant is its lungs and stomach traversed by a system of veins." (Theory of Horticulture.) All the pruning, therefore, that is necessary, when a tree is properly transplanted, will be comprised in paring smooth all bruises or accidental injuries received by the roots or branches during the operation, or the removal of a few that may interfere with elegance of form in the head.

Next in importance to the requisite care in performing the operation of transplanting, is *the proper choice of individual trees to be transplanted.* In making selections for removal among our fine forest trees, it should never be forgotten that there are two distinct kinds of subjects even of the same species of every tree, viz: those that grow among, are surrounded by other trees or woods, and those which grow alone in free open exposures, where they are acted upon by the winds, storms, and sunshine, at all times and seasons. The former class it will always be exceedingly difficult to transplant successfully, even with the greatest care; while the latter may always be removed with comparatively little risk of failure.

Any one who is at all familiar with the growth of trees in woods or groves somewhat dense, is also aware of the great difference in the external appearance between such trees and those which stand singly in open spaces. In thick woods trees are found to have tall slender trunks, with comparatively few branches except at the top, smooth and thin bark, and they are scantily provided with roots, but especially with the small fibres so essentially neces-

sary to insure the growth of the tree when transplanted. Those, on the other hand, which stand isolated, have short thick stems, numerous branches, thick bark, and a great abundance of root and small fibres. The latter, accustomed to the full influence of the weather, to cold winds, as well as open sunshine, have what Sir Henry Stewart has aptly denominated, the "*protecting properties*" well developed: being robust and hardy they are well calculated to endure the violence of the removal, while trees growing in the midst of a wood, sheltered from the tempests by their fellows, and scarcely ever receiving the sun and air freely except at their topmost branches, are too feeble to withstand the change of situation, when removed to an open lane, even when they are carefully transplanted.

"Of trees in open exposures," says Sir Henry, "we find their peculiar properties contribute, in a remarkable manner, to their health and prosperity. In the first place, their shortness and great growth of stem, in contradistinction to others in the interior of woods, are obviously intended to give the former greater strength to resist the winds, and a shorter lever to act upon the roots. Secondly, their large heads, with spreading branches, in consequence of the free access of light, are as plainly formed for the nourishment, as well as the balancing of so large a trunk, and also for furnishing a cover to shield it from the elements. Thirdly, their superior thickness and induration of bark is, in like manner bestowed for the protection of the sap-vessels, that lie immediately under it, and which, without such defence from cold, could not perform their functions. Fourthly, their greater number and variety of roots are for the double purpose of nourishment and strength; nourishment to support a mass of such magnitude, and strength to contend with the fury of the blast. Such are the obvious purposes for which the unvarying characteristics of trees in open exposures are conferred upon them. Nor are they conferred equally and indiscriminately upon all trees so situated. They seem, by the economy of nature, to be *peculiar adaptations* to the circumstances and wants of each individual, *uniformly bestowed in the ratio of exposure*, greater where what is more conspicuous, and uniformly decreasing, as it becomes less." (Planter's Guide, p. 105.)

Trees in which the protecting properties are well developed are frequently to be met with on the skirts of woods; but those standing singly here and there through the cultivated fields and meadows of our farm lands, where the roots have extended themselves freely in the mellow soil, are the finest subjects for removal into the lawn, park or pleasure ground.

The machine used in removing trees of moderate size is of simple construction; consisting of a pair of strong wheels about five feet high, a strong axle, and a pole about 12 feet long. In transplanting, the wheels and axle are brought close to the trunk of the tree, the pole is firmly lashed to the stem, and when the soil is sufficiently removed and loosened about the roots, the pole, with the tree attached, is drawn down to a horizontal position, by the aid of men and a pair of horses. When the tree is thus drawn out of the hole, it is well secured and properly balanced upon the machine, the horses are fastened in front of the mass of roots by gearing attached to the axle, and the whole is transported to the destined location.

In order more effectually to insure the growth of large specimens when transplanted, a mode of *preparing beforehand* a supply of young roots, is practiced by skilful operators. This consists in removing the top soil, partially undermining the tree, and shortening back many of the roots; and afterward replacing the former soil by rich mould or soil well manured. This is suffered to remain at least one year, and often three or four years; the tree, stimulated by the fresh supply of food, throws out an abundance of small fibres, which render success, when the time for removal arrives, comparatively certain.

It may be well to remark here, that before large trees are transplanted into their final situations, the latter should be well prepared by trenching, or *digging the soil three feet deep*; intermingling throughout the whole a liberal portion of decomposed manure, or rich compost. To those who are in the habit of planting trees of any size in unprepared ground, or that merely prepared by digging *one spit deep* and turning in a little surface manure, it is inconceiveable how much more rapid is the growth, and how astonishingly luxuriant the appearance of trees when removed into ground properly prepared. It is not too much to affirm, that young trees under favourable circumstances, in soil so prepared, will advance more rapidly and attain a larger stature in eight years, than those planted in the ordinary way, without deepening the soil, will in twenty; and trees of large size in proportion,—a gain of growth surely worth the trifling expense incurred in the first instance.

In the actual planting of the tree, the chief point lies in bringing every small fibre in contact with the soil, so that no hollows or insterstices are left, which may produce mouldiness and decay of the roots. To avoid this the soil must be finely broken with the spade before filling in, and one of the workmen, with his hands and a flat dibble of wood, should fill in all cavities, and lay out the small roots before covering them in their natural positions. When *watering* is thought advisable (and we practice it almost invariably) it should always be done while the planting is going forward. Poured in the hole when the roots are just covered with soil, it serves to settle the loose earth compactly around the various roots, and thus both furnishes a supply of moisture, and brings the pulverised mould in proper contact for growth. Trees well watered in this way when planted, will rarely require it afterwards; and should they do so, the better way is to remove two or three inches of the top soil, and give the lower stratum a copious supply; when, the water having been absorbed, the surface should again be replaced. There is no practice more mischievous to newly planted trees, than that of pouring water, during hot weather, upon the surface of the ground about the roots. Acted upon by the sun and wind, this surface becomes baked, and but little water reaches the roots; just sufficient perhaps to afford a momentary stimulus, to be followed by increased sensibility to the parching drought.

With respect to the proper season for transplanting, we may remark that, except in extreme northern latitudes, autumn planting is generally preferred for large, hardy, deciduous trees. It may commence as soon as the leaves fall, and may be continued until winter. In planting large trees in the spring, we should commence as early as possible, to give them the benefit of the April rains, as should it be deferred to a later period, the trees will be likely to suffer greatly by the hot summer sun before they are well established.

The transplanting of *evergreens* is generally considered so much more deficient than that of deciduous trees, and so many persons who have tolerable success in the latter, fail in the former, that we may perhaps be expected to point out the reasons of these frequent failures.

Most of our horticultural maxims are derived from Englisn authors, and among them, that of always planting evergreens either in August or later in autumn. At both these seasons, it is nearly impossible to succeed in the temperate portions of the United States, from the different character of our climate at these seasons. The genial moisture of the English climate, renders transplanting comparatively easy at all seasons, but especially in winter; while in this country, our Augusts are dry and hot, and our winters, generally dry and cold. If planted in the latter part of summer evergreens become parched in their foliage, and soon perish. If planted in autumn or early winter, the severe cold that ensues, to which the newly disturbed plant is peculiarly alive, paralyses vital action, and the tree is so much enfeebled that, when spring arrives, it survives but a short period. The only period, therefore, that remains for the successful removal of evergreens here, is the spring. When planted as early as practicable in the spring, so as to have the full benefit of the abundant rains so beneficial to vegetation at that season, they will almost immediately protrude new roots, and regain their former vigour.

Evergreens are in their roots, much more delicate and impatient of dryness than deciduous trees; and this should be borne in mind while transplanting them. For this reason, experienced planters always choose a wet or misty day for their removal; and in dry weather we would always recommend the roots to be kept watered and covered from the air by mats during transplanting.

When proper regard is paid to this point, and to judicious selection of the season, evergreens will not be found more difficult of removal than other trees.

Another mode of transplanting large evergreens, which is very successfully practiced among us, is that of removing them with frozen balls of earth in mid-winter. When skilfully performed, it is the most complete of all the modes, and is so different from the common method, that the objections we have just made to winter planting, does not apply to this case. The trees to be removed are selected, the situations chosen, and the holes dug, while the ground is yet open in autumn. When the ground is somewhat frosen, the operator proceeds to dig a trench around the trees at some distance, gradually undermining it, and leaving all the principal mass of roots embodied in the ball of earth. The whole ball is then left to freeze pretty thoroughly, (generally till snow covers the ground,) when a large sled drawn by oxen, is brought as near as possible, the ball of earth containing the tree rolled upon it, and the whole is easily transported to the hole previously prepared, where it is placed in the proper position; and as soon as the weather becomes mild, the earth is properly filled in around the ball. A tree, either evergreen or deciduous, may be transplanted in this way, so as scarcely to show, at the return of growth, any ill effects from its change of location.

From the Quarterly Journal of Agriculture.

On the Application of the principles of Vegetable Physiology and Chemistry to Agriculture.

By Henry R. Madden, M. D.

1. *Soil.* Science has already proved, in the most satisfactory manner, the following circumstances regarding soil:—

1*st.* In order that it may be fertile,

(1.) It must contain all the mineral matters found in the ashes of the plant destined to be clutivated upon it, in such a condition as to be available by the plants, and in sufficient quantity to enable the supply to be kept up by some economical mode of cultivation.*

(2.) It must consist of a due admixture of impalpable matter and larger sized particles, so that it may be porous and easy permeable by air and moisture, while, at the same time, there is a sufficient supply of matter in a state capable of undergoing chemical changes.

(3.) There must be a sufficient supply of organic matter mingled with it, in a state capable of decomposition by the action of air and water.

2*d.* To be fit for profitable cultivation,

(4.) It must be free from any mineral substance which is destructive of fertility.

(5.) It must be capable of being reduced to a sufficiently fine tilth, without and undue amount of labour.

(6.) It must either be naturally capable of letting off any excess of water which may fall upon it, or it must be capable of being made to do so artificially by draining.

(7.) It must possess a structure which will allow the decomposition of organic matter mingled with it, to proceed at a regular rate, being neither so fast as to waste the manure, nor so slow as to keep the dung too long fresh.

(8.) Its situations must be such as to admit of all the operations of husbandry being performed in a proper manner, without occupying too much time; and the climate must permit of the plants arriving at perfection.

3*d.* To be capable of continued cropping, the farmer must endeavour to keep up the essential qualifications of the soil in the following manner:

(9.) It must be ploughed and harrowed, and subjected to any other operation which may be necessary to pulverise it.

(10.) It must have its supply of organic matter, and part also of the mineral ingredients, renewed by returning to it from time to time in the shape of manure, what has been removed in the form of crops.

(11.) It must be kept in an active state, by having fermenting substances added to it at certain periods.

4*th.* To correct any natural faults which the soil may possess, it must be subjected to various processes which have been proved by experience to cure the faults in question; these we shall mention presently, and note under each head what are its effects, and under what circumstances it should be had recourse to.

We shall explain the reasons for all these requisites, and point out the practical advantages of being intimately acquainted with them; and likewise allude to what science may still effect, so as to increase our knowledge upon each point.

(1.) In order that soil may be fertile, it must contain all the mineral matters found in the ashes of plants destined to be cultivated upon it, in such a condition as to be available by the plants, and in sufficient quantity to enable the supply to be kept up by some economical mode of cultivation.

The necessity of this condition depends upon the well

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* In all these statements we shall speak of the circumstances proved by science, as they influence practical agriculture, and not as abstract questions of philosophy.

established fact, that plants cannot make for themselves any of the elementary substances which they contain, but are only capable of changing the form in which these are combined with one another. Thus, the organic portion of plants, or that which is destructible by fire, is composed of four elementary substances, namely, carbon or charcoal, and three gasses named oxygen, hydrogen, and azote. Now, plants cannot produce any of these four substances under any circumstances whatever: but if they are supplied with them in almost any state of combination, they can by their vital processes, convert them into starch, gum, woody fibre, or whatever else they may require. The same is the case with the constituents of their ashes. They must be supplied with the requisite elements in some state of combination, and then they will be able to produce for themselves the particular compound which they require.

Farmers have hitherto paid far too little attention to this; they have never been supplied with the information requisite for discovering the substances of which their crops are composed, and therefore they are not capable of judging correctly regarding the results which they obtain; for example, if one sees that a plant will not grow on a sandy soil, he tries it upon clay, and finding it to succeed there, at once feels satisfied that the latter is the soil most fitted for its growth; but another farmer sowing the same seed upon clay land obtains so poor a return that he determines to try it upon sand, and in this instance obtains an abundant crop, so of course is equally convinced that sand is the proper soil for the plants, and that to sow it upon clay is to waste both the manure and the seed. Now chemical analysis would have proved in this instance, that the rocks from which the first farmer's clay and the second's sand were produced, contained a good supply of some peculiar compound, which compound also existed in the ashes of the plants in question, and consequently the knowledge of this fact would have prevented both failures, and would have enabled each farmer to determine the true cause of his success, without leading them to contradictory conclusions. Such knowledge as this is quite practicable, even in the present state of the science; for the ashes of most cultivated plants have been analyzed, and all rocks have been most minutely examined, so that any farmer possessing a sufficient acquaintance with mineralogy or geology, to enable him to determine the species of rocks which has given origin to his soil, will, by referring to any work containing the analysis of minerals, be able to learn pretty accurately the contents of his soil; and some other book of reference will give him the composition of his crops; a comparison of the two will lead him so far towards a just conclusion as to what crops will best suit his particular farm. We must admit, however, that a considerable increase of knowledge is required before this can be brought to perfection; for, even after the comparison of the analysis of soil and crop, as above recommended, had shown a sufficient similarity of composition to warrant the belief that a plant would thrive well in some particular situation, the farmer might find that, after all, his crop was so scanty that it was not worth his while to expend any trouble upon its cultivation. Although science has already done much, more extended and minute research is greatly needed before this branch of the subject can be considered as at all approaching perfection; and we have no hesitation in affirming, that we believe much of the future progress of agriculture will depend upon increased knowledge in this wide field of chemical inquiry.

(2.) Soil, to be fertile must consist of a due admixture of impalpable matter and larger sized particles, so that it may be porous, and easily permeable by air and moisture, while, at the same time, there is a sufficient supply of matter in a state capable of undergoing chemical changes.

No fact has been more satisfactorily proved than the necessity of impalpable matter in soil; indeed, we may estimate pretty nearly the value of all soils, with the exception of clays, merely by determining the quantity of impapable matter which they contain.*

The value of the impalpable matter is threefold. *First.* Many of the most useful ingredients of soil are of value to plants until they are reduced to this extremely fine state of subdivision.—*Second*, Even the alkalies, and other soluble components of rocks, are scarcely at all dissolved by water until the rock has crumbled to the finest dust. *Third*, All the useful organic matter of soil is in a state of combination with this powder, so that, in fact to a certain extent, the whole value of the soil resides in this portion alone. But larger sized grains are absolutely necessary to make the soil fertile; not that they are themselves directly useful to plants, but because, without them, the other ingredients could not act effectively. This depends upon the necessity of air and water getting free access to every part of the soil, which could not be the case were it composed altogether of impalpable powder; because this would become so compact after it had once been moistened, that it would form a cake quite impermeable by air; and after it had once become thoroughly dry, almost equally impermeable by the roots of plants. Were it not that the larger particles are continually crumbling down, and adding to the impalpable powder those materials which would otherwise become gradually exhausted, and thus serve to keep up the original fertility of the soil, it would be of very little consequence of what these grains were composed; for until they are reduced to powder, they exert no direct influence whatever upon the vegetation of the soil, of which they form a part. The practical advantage of knowing the above facts will afterwards be shown.

(3.) There must be a sufficient supply of organic matter mingled with the soil in a state capable of decomposition by the action of air and water. Vegetable physiologists are much at variance as to the exact manner in which organic matter in soil affects the vegetation upon its surface, owing to some experiments which have proved the *possibility* of plants growing in soils destitute of all organic matter; but still they are quite agreed that, for the purpose of farming, there must be a good supply of elements entering into organic products; nay, they will admit that *cæteris paribus*, the quantity of vegetable and animal matter in soil is a direct index of its fertility. This being the case, we need scarcely remark, that a knowledge of the fact must be valuable to the practical farmer, because the process necessary to insure good crops must be greatly varied according to the abundance or scarcity of organic matter in the soil. If in poor land this matter abounds, something must be done to bring it into a more active state; if it is deficient, good crops can never be raised until a good supply is given it in the form of animal or vegetable manure. On this point we may expect great assistance from science; for hitherto we are very ignorant of the exact requisites, as regards organic matter in a soil, to suit it for each particular crop; and yet experience daily proves to us that there exists some peculiar relation between the two, which it has hitherto baffled all the endeavours of chemistry to detect. Should this difficulty be overcome, which we by no means despair of, the art of agriculture will acquire a degree of precision and certainty quite unattainable in the present state of our knowledge.

(4.) Soil, to be fit for profitable cultivation, must be free from any mineral substance which is destructive of fertility. We need scarcely offer any explanation of a fact which is so self-evident; because, however well a soil may be supplied with all the requisites of fertility, if it contain a single substance which is destructive to the growth of plants, it will of necessity follow that the soil must remain useless until this injurious matter is removed. The evident advantage of knowing the substance producing the sterility is, that chemistry can in very many instances suggest some practicable method by which the fault may be overcome. Thus, if the barrenness depend upon an acid, lime will cure it; if upon some soluble salt of iron, here again lime is needed; if upon some compound of magnesia, free exposure to the air will overcome the bad effects.

(5.) Soil must be capable of being reduced to a sufficiently fine tilth without an undue amount of labour, in order that its culture may be profitable. It does not require the aid of science to explain this statement, as it is one purely of economy; but we have thought it advisable to enumerate it here, were it for no other reason than to let the farmer see that, when studying theoretical agriculture, we do not forget that a process must be profitable before it can be advantageous. Were it not for this, the geologist might probably be loud in his praises of some plot of land of excellent qualities, but which was so stiff from an excess of clay, that it would require more labour and time to pulverize it, than could ever be recompensed even by the heaviest returns.

(6.) Soil for a good farm must either be naturally capable of letting off any superabundance of water, or it must be capable of being made to do so sufficiently by draining.

The immense advantages of draining have been far too fully treated of by many of those who have devoted themselves to the improvement of the soil to require any lengthened observations upon the subject here, because every farmer has already had his mind impressed with the importance of this process; and the disadvantages of an excess of water in soil have been so fully demonstrated as to require no additional proof in this place. It follows, therefore, if a soil be so situated as, on the one hand, to be exposed to the deteriorating effects of an excess of water, and, on the other, to offer insurmountable obstacles to drainage, this soil, however well constituted otherwise, is completely useless to the farmer, at least in the form of arable land.

(7.) Soil, to be useful to the cultivator, must possess a structure which will allow the decomposition of organic matter mingled with it to proceed at a regular rate, being neither so fast as to waste the manure nor so slow as to keep it too long fresh. In a practical point of view this deserves the greatest attention; and although the fact that sand may be too light and clay too heavy, has long been acknowledged by farmers, still science has taught us at least two valuable facts concerning this, viz., 1st. The cause of the fault in both instances; and 2d, the means of, in a considerable degree, overcoming it, by suiting the manure to the texture of the soil; or, if this cannot be effected by employing means which will in some degree alter its texture. 1st, the cause of manure wasting upon very light lands depends upon organic matter being decomposed and converted into gaseous matter which escapes into the atmosphere by the joint action of air and moisture, and of this action becoming more rapid the more freely the organic matter is exposed to the air, provided it is at the same time supplied with a sufficient amount of moisture, without ever being *very wet*. Now, this is exactly the condition of manure in light sandy soils; the looseness of their texture admits of the freest circulation of air through their interstices, and at the same time allows all excess of water to flow through the soil during wet weather, while it facilitates the rising up of moisture from the constantly damp subsoil in time of drought; the result therefore is, that the manure is always freely exposed to air, is kept moist, and never allowed to remain long *very wet*.—Thus, the very condition in which decomposition takes place with the greatest rapidity is constantly preserved and the manure in consequence yields its most valuable ingredients to the air, instead of to the roots of the plants, and every wind which blows over the surface of such a soil wafts away, for the benefit of the whole neighborhood, and which ought to have been limited in its influence to the spot to which it was applied. The very reverse of this is the case with stiff clay; here the access of the air is greatly impeded; in fact, unless such land is very well wrought, no air can pierce below its surface, except such as is dissolved in the water which falls upon it, and the escape of water is so much retarded, that all substances contained under its surface are kept constantly *wet*. Manure, in this instance, is in the best condition to withstand decomposition, because, if thoroughly wetted, it is acted upon by the air dissolved in the water, but after that is exhausted no further change takes place except by very slow degrees. But a manure to be useful must be in a state of decomposition, for, until decomposed to a certain extent, it is of no value whatever to plants, the result, therefore, in this case is, that however much manure is given to the land, the greater quantity remains in a useless state, until, by the alternate drying and wetting of the soil by change of weather, its decomposition is at length effected. 2nd, The practical value of a correct knowledge of the above facts is evidenced by its enabling us to correct the faults, in a certain degree, by a proper choice of manure; for example, in the case of very light lands the farmer should avoid using those manures which are most easily fermented and dissipated, and should employ in preference such as take a longer time to enter into decomposition, as, for instance, woollen rags, wool waste, &c., and the cooler kinds of excrement, preferring that of the cow and sheep to that of horses and pigs.

Again, if circumstances do not admit of so free a selection, he should apply his farm-yard dung in a much fresher condition than he would to his clay land, and as near the time of sowing as he conveniently can, because

* This experiment is easily performed. Take a glass tube about an inch in diameter, and two feet long, closed at one end; put into the tube about two inches of soil to be examined; fill the tube three parts full of water, and shake well; place it upright, and let the soil subside; the impalpable matter will form the uppermost layers of the deposite, and its quantity per cent. is easily found by measurement and calculation.

the more fermented it is previous to its application, and the longer it lies on the bare ground, the greater will be the amount of loss. The treatment of land of too stiff a texture is two-fold. *First*, By selecting the most putrescent manures, and either having them well prepared before they are applied, or ploughing them in some time previous to the sowing of the seed; *secondly*, Should circumstances permit, there are many cases in which, to a certain extent, a permanent cure can be effected, and the texture of the soil altered and rendered more open, by sufficient drainage, deep ploughing, and *paring and burning*.

We shall comment at large upon these under the fourth division, in which we purpose to consider the cures for many of the natural defects in soil.

(8.) The situation of soil must be such as to admit of all the operations of husbandry being performed in a proper manner, without occupying too much time; and the climate must permit of the plants arriving at perfection.

This is another purely practical observation, requiring no explanation further, than to prove that in treating of a practical subject science must bind herself by laws to which she is in general a stranger. For example, were a chemist merely required to answer such a question as this, "Is the soil, of which the accompanying is a specimen, fit for cultivation?" he would analyze it, and finding all the requisites of a fertile soil, at once pronounce it well worthy of the attention of its possessor, whilst it might have been taken from the side of some hill far too steep to admit of horse labour, and exposed to a climate so bleak, that no crop could ever yield a profitable return. In this instance, a soil in itself excellent is rendered useless by external circumstances; but in order that the farmer may profit by the suggestions of the chemist, I need hardly remark, that *every* modifying condition, whether external or internal, must be carefully weighed before pronouncing a decided opinion.

(9.) In order that the soil may be advantageously subjected to continued cropping, the farmer must keep up its essential qualities by ploughing, harrowing, and any other operation necessary to pulverize it. The value of the impalpable matter in soil has been already alluded to under (2), and we shall accordingly confine ourselves in this place to the enumeration of the practical advantages arising from a knowledge of the facts there brought forward.

The effect of plowing, harrowing, &c. &c. is two-fold: 1st. It loosens the soil and renders it more porous; 2d, it pulverizes it: both of these are of the greatest value; for while the first prepares the soil for a freer admission of air and moisture, the latter renders these capable of acting chemically upon the different ingredients contained beneath its surface. The necessity of pulverizing is evident, because, as far as plants are concerned, it is of little consequence whether their roots come in contact with an agglutinated mass of powder, or a stone; both are equally impenetrable, and hence both are equally useless; so that a soil badly pulverized is in many respects similar to a very stony soil, with one exception, viz. that the masses of matter which are capable of being reduced to powder, being more porous than stone, are capable of absorbing a greater quantity of the liquids contained in soil, and thereby impoverishing the land; it is therefore of the greatest consequence for the fertility of the soil, that it should from time to time be pulverized to the greatest extent of which it is capable, without the expenditure of *too great* a quantity of labour. All must be aware that Jethro Tull was so deeply impressed with the importance of this pulverizing of the soil, that he frequently affirmed that, if properly performed, it might altogether supercede the necessity of manuring. Of course this idea is extravagant, but still, as it resulted from practical experience, it tends to show in a forcible light the great value of the operation. In process of time, science may enable us to employ some more efficient method for increasing the quantity of impalpable matter in soil, in a shorter period than it can be effected by the gradual disintegration of the stones by the influence of the weather, and thus render the loosest sands capable of profitable cultivation.

(10.) Soil intended for continued cultivation must have its supply of organic matter, and part also of its mineral ingredients, renewed by returning to it, from time to time, in the shape of manure, what has been removed from it in the form of crops. We have already observed that physiologists are far from being at one in their ideas regarding the exact manner in which the organic matter of soil influences its vegetation, but still they all acknowledge the practical advantage of a good supply; many, however, suppose that the value of manures consists merely in their mineral ingredients, while others place all their value in one single element of their organic portions, namely their azote. Be this as it may, we have still the fact acknowledged by all, that to keep up the productive power of a soil, it must be supplied with manure. Much practical advantage may be gained by studying carefully the relation subsisting between the composition of a soil, and that of the manure best suited for it, because it will invariably be found that that manure acts most beneficially which contains the best supply of whatever is deficient in quantity in the soil for which it is intended, and that much good material is constantly lost or rendered unprofitable by the absence of any attempt to accommodate the manure to the soil. When the researches of the chemist shall have enabled him to decide with accuracy as to the peculiar food best adapted for each crop, this accommodation will be capable of being carried to a much greater extent than it possibly can be at present.

(11.) But the *condition*, as well as the *composition* of the manure must be attended to, because soil must have its activity preserved by adding to it, at certain periods, substances in a state of fermentation. Numerous facts tend to prove that the success of many crops depends upon the existence of fermenting matter in the soil, and that however rich it may be in other respects, these crops can only be advantageously cultivated after a fresh addition of manure; this is particularly the case with the turnip—Without dung the richest soil will bear but an indifferent crop; while with manure, very poor soil, if it be not too wet, will at all times give a good return. Science has not yet been able to account for this satisfactorily, although many of her votaries are willing to acknowledge its truth, and it is obvious that an acquaintance with the fact must be of the greatest value in assisting the farmer in his arrangements, for he will of course apply dung when he intends to raise a crop requiring the existence of fermenting matter, and thus ensure its success while he does no injury to the following crops, whose growth is, to a certain extent, less dependent on the condition of the soil.

4. It frequently happens that the farmer is not contented with his soil in its natural condition, on account of certain defects under which it labors, and which the recorded experience of his ancestors has informed him can be overcome or counteracted by certain processes which he may carry into effect with more or less facility, according to circumstances. The chief of these are draining, liming, and paring and burning; and our object in mentioning them here is to point out what is really effected by each, so that farmers may be prevented from misapplying them from ignorance of their peculiar mode of action.

(To be continued.)

PROFITS ARISING FROM FOWLS.—Mr. E. G. Tucker of Milton, tells us he obtained 600 dozen of eggs, in one year, from 83 hens—this was his highest number of fowls; he sometimes had less—that for 562 dozen he took $100 within one cent. The whole amount of his cash receipts was $123,33, and his cash expenditures were $56,43, leaving him a balance of $66,90.

Mr. Tucker deserves much credit for his accuracy and his particularity in keeping his accounts. Sixty-six dollars for the *trouble* of seeing to 83 hens is no small sum. It would pay the taxes on almost any farm; and it would more than half pay a good laborer for a year.

Mr. T. has very convenient yards and high picket fences. He lets his hens run at large when they can do no mischief, and he can put them in bound just when he pleases. He has but a small farm, but his soil is good, and his trees show their gratitude for the care taken of them. The moist and loamy hills of Milton are very favorable to the growth of the apple tree.—*Mass. Ploughman.*

DISTEMPER IN DOGS.—As soon as the animal is discovered to be sick, give it a tablespoonful of table salt forced down his throat, holding the mouth together until the animal has swallowed it; turn him loose, watch him closely, and if he does not vomit in twenty minutes repeat the dose until he does; let him rest from the exertions half an hour, and then burn under his nose tar, feathers, and a small quantity of brimstone, until a running at the nose is discovered. Repeat the dose of salt every morning, and the smoking three times a day until a cure is effected. I have raised many valuable dogs, and have had the distemper among them often, and never yet lost one.—*Southern Planter.* A VENATOR.

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

MR. RANDOLPH'S ESSAY—We are indebted to the author, for a copy, in pamphlet form, of "An Essay by *T. J. Randolph*, esq. delivered before the Agricultural Society of Albemarle county, Virginia, at their annual Fair, on the 29th of October, 1842." This essay comprises 16 pages of as instructive matter as we have read for many a day, and evinces great research and discriminating observation. As we shall take an early opportunity of laying extracts from this able production before our readers, we will content ourself at present by observing, that Mr. R. has added much to the interest of the subjects of his essay by narrating interesting facts connected with the history of the introduction and early culture of several of the products of the earth—facts which, while they demonstrate that he has drank deep in the lore of his calling, show, that agriculturists of every age and clime have been tardy in yielding their assent to any thing that looked like an innovation upon the *good* old customs of their grandsires.

GUANO—We have received from Messrs. Wm. Wilson and Sons, a present of a bag of this *manure*, and shall be happy to furnish portions of it to gentlemen who may feel disposed to make experiments with it, and report to us the results thereof. From the various trials made of it in England, it has there proved to be a most active and powerful manure; a very small quantity exerting an equally efficient effect with the heaviest dressings of putrescent manures, and being withal more durable. At present, it is the most popular of all the substances used in the melioration of the soil, in England, and employs many shipping in transporting it thither from South America, and sells at a very high price.

The lot, of which the bag presented to us is a part, was received by one of the vessels of Messrs. W. & Sons, trading to South America; and those gentlemen will accept our thanks for this demonstration of their attention to the agricultural interest, and we are sure it will be duly appreciated by that deserving and important class of our people.

A GOOD VARIETY OF CORN—We are indebted to Mr. Tho. Martin, of Prince George's county, for a sample of a very fine variety of corn. In his note to us he states, that he met with it about twelve months since on a farm on the Potomac, and was so much struck with its appearance, as to induce him to carry home with him two ears, which he planted last spring, but did not make a fair experiment of its product, in consequence of the seed having been mixed with other corn by a servant before he was aware of it. But, from what he has seen of it, he is induced to believe, that on good ground it will produce a most abundant crop. The ears sent us are of very large size, the kernels deep, pearly white and flint, hard flint, the outer edges resembling the gourd seed. We counted two of the largest ears, the one contained 1108 grains, the other 1098, the one having 22 and the other 23 rows of corn on it—the cob is, as may be supposed from the number of rows, large, but not disproportionately so, and we have no doubt whatever, that it will measure well in the relative proportion of shelled corn to the barrel of ears. Indeed it is impossible from the length of the grains, that it could be otherwise. In appearance, before being shelled, it bears some feint resemblance to the *Maryland twin* corn, though the ears are larger and the grains much more flinty; this resemblance ceases, however, when you come to examine the kernels, the latter being much broader and whiter. We regret that Mr. Martin did not make a fair experiment of its productive properties, as, after all which may be said and sung about this, or that variety, *quantity* is the essential thing when you come to crib the crop of corn. As Mr. M. promises to give a fair experi-

ment of its productive capabilities next year, we can only wish that his fondest anticipations may be more than realized, and request, that, whether it proves productive or otherwise, he will favor us with a report upon the result of his trial.

As to *quantity* upon an ear, we can speak advisedly, if we are permitted to judge of *the variety*, by the six ears sent us—as either of them would shell a pint. We shall be happy to distribute among our friends the sample left with us.

Stock for the South—We recently shipped to Nathl. Heyward, jr. esq. of Beaufort, S. C. the beautiful thorough bred Devon bull "*Consul*," belonging to Mr. Stanley, which took the first premium for bulls of his breed, of a Silver Goblet, at the late Fair of the Baltimore Co. Agricultural Society. Also at the same time for the same gentleman, a younger bull and a couple of young heifers, of the same breed. We have since witnessed the shipment of another bull of the same breed, belonging to Mr. Stanley, "*Waverly*," which also obtained the first prize of a Silver Medal for Devon bulls between 1 and 2 years old. This bull is of the Patterson stock, and was accompanied by two beautiful heifers, one of them "*Helen*," also a prize animal—these last have gone to the old North State, for A. Hargrave, esq. and a neighbor of his, of Lexington, N.C. We congratulate our friends in those neighborhoods on the introduction of such fine breeders, and have no doubt an evident improvement in the stock of the country will in due time be the result, by a cross with those animals.

We have also sent to Rev. P. L. Wade, of Scriven co. Geo. that fine specimen of the Berkshire breed of hogs, the boar "*Henry*," bred by Messrs. Gorsuch from their imported "Prince Albert"—Henry received the first prize at our late Fair, and will do credit to his breed and his breeders wherever his lot may be cast.

The Louisville (Ky.) Journal, says—Mr. P. Chamberlain of this neighborhood, again raised a crop of corn this year on the plan of Geo. W. Williams, esq. of Bourbon co. laying off the rows, however, 2½ feet apart, a single stalk every foot and a half in the rows, instead of having the rows 2 feet apart with a stalk every foot. Mr. G. had one acre measured, and the produce was 112 bushels. All the work which he gave his corn was to pass a cultivator through it once. The ground was of the ordinary fertility of his farm. The season was very unfavorable to corn, inasmuch as not a drop of rain fell in July, the time at which corn most needed rain.

The plan of Mr. Williams, alluded to in the above, will be found detailed in a statement from that gentleman published in the "American Farmer" of the 11th Nov. 1840.

We have had a most copious rain and thaw, which has dissipated the late deep snow.

Correction—In transcribing the report of the Committee on Farms, of the Berlin Agricultural Society, the writer omitted the names of two of the Committee—We are requested to say, that it should have been signed "C. W. Jacobs, James Derickson, and John Powell."

In the report of the proceedings of the Baltimore county Agricultural Society, it is stated that a silver medal was presented to *Thomas* Hamelin, for his water proof hat—It should have been *Francis Hamelin*, whose manufactory is at No. 47 Bond street, F. P. The hat is well calculated for farm hands and other laboring men, watchmen, boatmen, and others, whose business subject them to exposure to the weather, and we hope Mr. Hamelin will be encouraged in introducing them into general use.

The New York Express says:—Private letters from Europe are somewhat cheering; and it is said that American Securities are looked upon with more favor. This news has had a very favorable influence on our market, and Stocks of nearly all descriptions have improved. To-day in consequence there have been quite extensive transactions. The Cotton market is also strengthened by the news.

A SUITABLE HEDGE PLANT—We copy the following *chapter* from Downing's "Treatise on the theory and practice of Landscape Gardening," and we think the suggestion which it makes, of adapting the *Holly for live fences*, will be approved by every one acquainted with the character of the tree. And as the time is now at hand when the berries may be gathered and sown, we trust that some gentleman will make the experiment of growing a hedge of them. Certain we are, that a more beautiful, durable, or efficient barrier, could not be presented to the ingress of stock, than would be a hedge, well trained, made of the Holly.

THE AMERICAN HOLLY TREE. *Ilex.*
Nat. Ord. Aquifoliaciiæ. Lin. Syst. Diœcia, Tetandria.

The European Holly is certainly one of the *evergreen glories* of the English gardens. There, its deep green glossy foliage, and bright coral berries, which hang on for a long time, are seen enlivening the pleasure grounds and shrubberies throughomt the whole of that leafless and inactive period in vegetation—winter. It is also in our mother tongue, inseperably connected with the delightful associations of the merry Christmas gambols and feastings, when both the churches and the dwelling houses, are decorated with its boughs. We have much to regret, therefore, in the severity of our winters, which will not permit the European Holly to flourish in the middle or eastern states, as a hardy tree. South of Philadelphia, it may become acclimated; but it appears to suffer greatly farther north.

A beautiful succedanum, however, may, we believe, be found in the *American Holly*, (Ilex Opaca,) which, indeed, very closely resembles the foreign species in almost every particular. The leaves are waved or irregular in surface and outline, though not so much so as those of the latter, and their color is a much lighter shade of green. Like those of the foreign plant, they are *armed* on the edges with thorny prickles, and the surface is brilliant and polished. The American Holly is seen in the greatest perfection on the Eastern Shore of Maryland and Virginia, and the lower part of New Jersey. There it thrives best upon loose dry and gravelly soils. Michaux says it is also common through all the extreme southern states, and in West Tennessee, in which latter places it abounds on the margins of shady swamps, where the soil is cool and fertile. In such spots it often reaches 40 feet in height, and 12 and 15 inches in diameter.*

Although the growth of the Holly is slow, yet it is *always beautiful;* and we regret that the American sort, which may be easily brought into cultivation, is so very rarely seen in our gardens or grounds. The seeds are easily procured, and if scalded and sowed in autumn, immediately after being gathered, they vegetate freely. For HEDGES *the Holly is altogether unrivalled;* and it was also one of the favorite plants for *verdant sculpture*, in the ancient style of gardening. Evelyn in the edition of his *Sylva*, published in London in 1664, thus bursts out in eloquent praise of it: "Above all, natural greens which enrich our home-born store, there is none certainly to be compared to the holly; insomuch that I have often wondered at our curiosity after foreign plants and foreign difficulties, to the neglect of the culture of this vulgar but incomparable tree,—whether we will propagate it for use and defence, or for sight and ornament. Is there under Heaven a more glorious and refreshing object of the kind, than an impenetrable hedge of 165 feet in length, 7 feet high, and 5 in diameter, which I can show in my poor garden, at any time of the year, glittering with its armed and varnished leaves? The latter standards, at orderly distances blushing with their natural coral. It mocks the rudest assaults of the weather, beasts, or hedge-breaker:

"Et illum nemo impune lacessit."

[*The Holly grows on both shores of this state, and in every variety of soil and exposure. We have seen trees of it 30 feet high and 8 or 10 inches in diameter of trunk, growing on the borders of a wood in an old field of worn-out white clay, tenacious enough to make bricks of, and so retentive of water that draining was essential to the healthful vegetation of crops.—*Ed. Am. Far.*]

The article on the *transplantation of trees*, and the one on the *improvement of soils*, are eminently worthy of attentive perusal.

A BEAUTIFUL RESULT OF INDUSTRY.

We copy with pleasure, the following Report of the Committee on Farms of the Agricultural Society of Middlesex co. Mass. It affords a most praiseworthy example of persevering industry, intelligently directed enterprize, and triumphant reward. On reading this brief report, one is at a loss which most to admire, the indomitable courage with which Mr. *Viles* was inspired, in attempting the improvement of a farm so discouraging in every aspect in which it could be viewed, or the far-seeing ken which enabled him to behold through the vista of the future, prospective remuneration for the herculean difficulties and toils which were present and around him on every hand, tho' sufficiently appalling, to have made any but a go-ahead yankee turn away in despair. There are few farmers, in these parts at least, who would have taken Mr. Viles' little farm, of ninety acres, as a gift, on condition of improving it as he has done, and still fewer, whose imagination could have conceived the possibility of getting a living out of it for themselves and families, and yet we find this labor-daring pilgrim son, not only removing every obstacle to its improvement, but rendering an impracticable mass of stone and marsh a very garden spot, from which he annually draws not only the support of his family, but an annual income of nearly $1500, a greater amount of clear profit, we will venture to assert, than the majority of farmers make off of farms four times as large. Such instances of brilliant success, should teach us two wholesome lessons—the one is, that there are but few obstacles, in the improvement of the soil, which may not be overcome by patient labor, enduring perseverance, and judicious expenditure—and the other, that concentrated strength, energy and intelligence, upon small farms, are more certain of producing the generous reward of industry, than when they are divided in the cultivation of large ones. To us, the practice of cultivating immense estates, with circumscribed means—of cropping large fields without manure, or with but a scanty supply, has always appeared to be unwise, and as involving a great waste of time. How infinitely preferable would it be for us all, to cultivate no more land than we can manure well, and properly tend in a judicious course of rotation, than to be fruitlessly grasping at the vain ambition of being considered an extensive farmer. The more legitimate *ambition* would be, of striving to earn the reputation of being a *good* one, and of attempting nothing but what we could do *well.*

Farm of Mr. Jonas Viles, of Waltham, Mass.

This farm is situated about two miles from Waltham Plain, and eleven miles from Boston. It contains ninety acres of land, part hilly and very rocky, and part swamp and bog meadows, four acres of which have been reclaimed. Fifteen years ago Mr. Viles begun to make improvements on this farm. At that time much of it was entirely unproductive, and covered with rocks that would discourage most men, but, with a persevering, well directed industry, Mr Viles went to work, and no doubt he has dug up and removed stone enough to build four monuments as large as that on Bunker Hill; and these stone have been buried up in his meadows, and disposed of in his double walls, where they will long remain, a *monument of his industry*, at least. After removing the stone, he planted the land, and on much of it sat out apple trees. His barn is 100 feet long, and 35 feet wide, with a back linter built on, and a cellar under about two thirds of the whole. He makes the manure mostly under cover, part in the cellar and part in the shed, and buys about ten cords of horse manure annually.

This is a milk farm now, and has been for several years, and much attention is given to the growing of roots for the cows, such as ruta baga, sugar beet, mangel wurtzel and English turrips. He keeps 12 cows in the summer, and 20 in the winter, three horses, six young cattle, and a good number of hogs. He carries his own milk to market every day, and buys some from his neighbors. He probably makes enough by carrying milk for his neighbors to pay for marketing his own, and in that case his own milk would yield him at home the market price in Cambridge or Boston.

The produce of the farm the present year, is by estimation—

32,580 qts. of milk 5½ cts.,	$1,806 75
500 bushels potatoes, 40 cts.,	200 00
350 bbls. picked apples, $1,50,	525 00
Peaches, pears and windfull apples,	130 00
Vegetables not enumerated,	75 00
	$2,376 75

It should be understood that this is the amount *actually sold*, and does not include the produce consumed on the place, either by the family or stock.

The expenditures are as follows:

3 men 8 months at $15 per month,	$360 00
1 man 4 " at $12 "	48 00
Board of men,	234 00
Salt, hay, grain and manure bought,	400 00
Blacksmith's bill,	50 00
Wear and tear of wagons, tools, &c.,	100 00
350 flour bbls. at 20 cts.	70 00
Taxes on the farm,	30 00
	$1,292 00
Balance of net profit,	$1,444 75

In their examination of this farm the Committee saw many things to admire. The crops all presented a fine appearance, the cornfields particularly. Mr. Viles raises the same kind of corn that he has had for fifteen years. Every year, before it is gathered, he goes through the field and selects the earliest and best filled ears for seed. By long practising this course, he has much improved his corn. No doubt any kind of a crop may be improved by taking a similar course with the seed. The Committee were much gratified with the neat and tidy appearance of things about this farm, and particularly about the buildings, which are well constructed and convenient. Indeed, at every turn, there is something to suggest the idea of *convenience*. The notion of *utility* seems to prevail over all others.

The Committee award to Jonas Viles, of Waltham, the first premium of $25 00.

Improvement and value of Sandy Lands.

In the address delivered by Gov. Hill before the Frankfort county Agricultural Society, of the state of Maine, we find the following detail of facts in connection with the improvement of light lands, and the productive capacity to which they are competent of being raised by manure and judicious management:

I have for the last three years watched a piece of ground six miles out of Boston which was taken up by a kinsman of mine about eight years ago, and was when he began upon it a barren plain producing on ten acres scarcely sufficient to pasture a cow—an old field on which stunted hard pines had grown in part, and where the cleared part had been ploughed once in four or five years to obtain an annually diminishing crop of rye. Ten acres were all that could be had in the purchase—the widow's thirds of five adjacent acres, which could not be bought, were hired for a series of years at a greater rent than the value of all that had ever been obtained from it. The lot of land was at no great elevation above the Spy pond in West Cambridge, Massachusetts, and was bounded by its shore on one side. After four years successful cultivation, my friend found his land so valuable that he concluded to make an addition and fill in a nook of half an acre of the pond itself with sand from an adjacent bank; this was done to fill up the time of hired men when they had not full employment in making preparation for and cultivating the succeeding crops. Incredible as it may seem, with the assistance of two or three hired men in summer and the hands of some three or four females including the children of the family, this gentleman has brought the ground to that state of cultivation in which it gives him of a season in cash from four to five thousand dollars, or between two or three hundred dollars for every cultivated acre. A most profitable part of this ground is about two acres of strawberries, which give only one crop in a year. I visted this spot in the midst of the severe drought of 1840; and although the land all around it in the heat of July was parched and burnt up, here the various vegetation, not yet ripened or taken away, was clothed in the verdure of spring. The strawberry bed had not yet quite done bearing—it had been preserved from the effects of drought by salt hay laid in between the rows and drawing and retaining moisture which was given to the aid of the roots of the adjacent plants. The salt marsh hay was used for the double purpose of covering the strawberry ridge in winter and assisting in its vegetation in summer, becoming at the close of the season the best material for the compost heap.

Two, three and four crops were obtained in a year from this ground. Manure was always ready to be applied to the present crop. The preparation of the ground continued through the whole year. Onions sowed in the fall came out early in the ensuing summer, and afforded room for a crop of late potatoes, or beans, or cabbages in the same season. Spinach taken off in March was followed by early peas: these gave place to potatoes, and to these succeeded English turnips in the same year. That all four of these crops might have time to grow, the one would be planted and coming out of the ground while the other was maturing. The ground sheltered by artificial means facing the sun nearest the shore of the pond was taken up in forcing an early growth of various vegetables and plants, as peas and cucumbers, squashes, cabbage and tomato plants, &c. At a small expence an apartment with a glass covering to be opened to the air in warm weather was constructed for the use of artificial heat. But it was most remarkable to witness the success of vegetation upon that part of the pond shore that had been converted into land: the bottom was the flowing coarse sand of the Spy pond, and the addition was pure yellow sand of a finer texture from an adjacent bank. With this manures in no greater than usual qualities, was intermingled. The production from the made ground whose basis was almost clear pure sand was as great as it could be in any soil.—The proprietor considered it more safe from the effects of drought, inasmuch as eighteen to 24 inches in deph, would carry it to the common level of the pond.

The astonishing production of this portion of the almost abandoned Menotomy plains of forty years since seemed to be indeed a wonder; but it was a wonder that is already becoming common in that vicinity. Other cultivated fields, from the same kind of land, are now frequent in the neighborhood. At first it seemed there was something in the Menotomy pine plains peculiar to its near vicinage and level with the sea and salt water that would make it an exception to the pine plains more distant from the sea-coast and more elevated; but observation has since convinced me that the most of the interior pine lands are even better than the Menotomy plains were in their original state.

Page's Corn Planter.—We observe with pleasure, that our townsman, Mr. George Page, was awarded a Diploma for his corn planter by the American Institute. By the way, this is a most efficient and excellent machine, calculated alike for the drilling of corn, rice, beets, turnips, carrots and parsnips, and so constituted and arranged that the seed may be dropped at any required distance. It makes the furrow, drops and covers the seed and rools the ground at one and the same time, and will perfect ten acres of good work in a day. [American Farmer (Baltimore).

Whew! whew! How came this to be *Page's* Corn Planter? Did he invent it, or has he purchased the right?

Be it known to all whom it may concern, that William Buckminister, of Framingham, the Publisher and Editor of the Ploughman, invented the "Corn Planter" now exhibited by Mr. Page as *his own*, and obtained a patent for it.

Mr. Page has been duly authorized by the proprietor to exhibit and sell the same planter in certain States of the Union, not as his own, but as the invention of the proprietor.

If Page had made a true representation of the case the "Diploma" would have been awarded to Wm. Buckminister, the Inventor.

If the Publisher of the American Farmer will copy this notice he will much oblige us.—*Massachusetts Plough.*

We comply with the request of our friend Buckminster in publishing the above, and will state that on reading it we thought it right to ask an explanation of Mr. Page, and with that view called at his factory, but not finding him in made the necessary inquiries of his clerk, from whom we learnt, that some years since Mr. Page had an interest in a corn planter jointly with Mr. Buckminster, (the latter the inventor) but that after trial it was found not to answer the purpose, a number which had been sent South being returned as inefficient; that subsequently Mr. Page had made the one he now vends, which is his invention, and for which he obtained *letters patent* on the 5th of May, 1840. Of the history or utility of friend Buckminster's corn planter we know nothing personally: of the one claimed by Mr. Page, from personal observation we are prepared to speak most favorably, and leaving Messrs. Buckminster and Page to settle their respective claims to invention, we feel bound to state, that the clerk of the *latter* shewed us the *patent* granted as above stated, and that the *draught* of the Corn Planter thereon, corresponds with the machine manufactured by Mr. Page.

We learn from the Natchez Free Trader that at the late Washington Fair (Miss.) were exhibited some samples of very fine silk and nankin cottons raised by Doctor Lovelace, of Wilkinson county.

Mr. Peter Rucker exhibited several dozens of a very finely flavored segar, made from tobacco raised from the Cuba seed. It is said they were fully as good as the medium Habannas, and lacked only age to render them equal to the best. We should think the examples of both these gentlemen might be followed to advantage by many of our farmers.—*New Orleans Bul.*

Extraordinary Farm Produce—Notwithstanding all that has been said and written on Agriculture in Ireland, and besides the many instances of successful practice in parts of the country, comparatively little is yet known of the real fertility of the soil, and immense capabilities of this hitherto neglected part of the empire. The people know not the extreme powers of the land, for in few instances has a farm been brought by judicious cultivation to the maximum point of its production. Perhaps the most successful example of what land is capable of, under proper management, in Ireland, and what immense crops may be raised, may at present be seen on the national model farm, under the Board of Education at Glasnevin, near Dublin. This farm is strictly conducted on the improved system of green cropping and house feeding. The farm contains 52 statute acres, is conducted on a scientific rotation; on it are kept during the year 22 head of cattle, with 3 horses. It supplies on an average 90 persons during the year with farm produce, such as milk, butter, potatoes, vegetables, &c. and the farming establishment with pork, besides a number of private families in the above articles: a considerable quantity of vegetables are carried to market, and all kinds of grain which is abundant. There is at present a crop of oats upon the farm, the produce of 14½ British acres; it is secured in eight stacks and is estimated by the best judges to be equal to the average produce of fifty acres. It stood perfectly close upon the ground, averaged six to seven feet in height, the head and ear corresponding. The other crops, potatoes, turnips, Italian rye grass, &c. of like quality. The manager conducts the farm on his own account, pays £257 7s 6d per annum of rent, besides other expences, amounting in all to upwards of £400 per year; and we are informed as we believe that he realizes a very handsome annual sum from it besides. He labors and manages it almost exclusively by a number of boys, agricultural pupils and teachers, who are there in training in the science and practice of agriculture. As a test of what land is capable of producing when brought to its maximum point, there are few examples such as we have in this particular instance; there is perhaps more crop raised, more cattle kept and fed, more human beings supplied with the common necessaries of life, more manure accumulated, more employment given, and in fact, more money made, on this spot of ground, than on any farm of the same extent (conducted on a proper scientific rotation of grain and green crop.) Did the average land of Ireland produce only one half the value according to quality that is on the model farm, we should hear no more of corn laws, tariffs, or want of employment among the people.

Cheap Paint.—A subscriber wishes us to give a recipe for cheap paint. We have never had much experience in the painting line, whether cheap or dear. The following is laid down in Smith's Art of House Painting, which is highly recommended. Take of skimmed milk nearly two quarts; of fresh slacked lime about six ounces and a half; of linseed oil four ounces, and of whiting three pounds; put the lime into a stone vessel, and pour upon

it a sufficient quantity of milk to form a mixture, resembling thin cream; then add the oil a little at a time, stirring it with a small spatula; the remaining milk is then to be added, and lastly the whiting. The milk must on no account be sour. Slack the lime by dipping the pieces in water out of which it must be immediately taken and left to slack in the air. For pure white paint, the oil of caraways is best, because colorless; but with ochres the commonest oils may be used. The oil, when mixed with the milk and lime, entirely disappears, and is totally dissolved by the lime, forming a cacareous soap. The whiting, or ochre is to be gently crumbled on the surface of the fluid, which it gradually imbibes, and at last sinks: at this period it must be stirred in. This paint may be colored like distemper or size color, with levigated charcoal, yellow oche, &c. and used in the same manner. The *quantity* here prescribed is sufficient to cover twenty-seven square yards with the first coat. The same paint will do for out door work by the addition of two ounces of slacked lime; two ounces of linseed oil, and two ounces of burgundy pitch; the pitch to be melted in a gentle heat with the oil, and then added to the smooth mixture of the milk and lime. In cold weather it must be mixed warm to facilitate its incorporation with the milk.—*Maine Farmer.*

FIRE-PROOF CEMENT.—Take a quantity of water, proportioned to the surface of wood you may wish to cover, and add to it as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution, 1st, a quantity of flour paste of the consistence of common painters' size; 2d, a sufficient quantity of pure clay to render it of the consistence of cream. When the clay is well mixed, apply the preparation as before directed to the wood: it will secure it from the action of both fire and rain. Subjected to violent heat, the wood thus saturated may be carbonated, but will never blaze.—*Selected.*

EMPLOYMENTS.—The census of 1840 shows that the people in the United States are employed as follows:

Agriculture - - - - - - -	3,719,961
Mining - - - - - - -	15,950
Commerce - - - - - - -	118,606
Manufacturing and trading - - -	791,739
Navigation of the ocean - - -	55,021
Navigation of canals and lakes and rivers	32,976
Learned professions and engineers - -	65,255

It will be seen by the above that there are more than three times as many persons employed in agriculture as there are in all the other employments in the United States.—*Globe.*

WAR.—Voltaire thus expresses himself on the subject of war:—"A hundred thousand mad animals, whose heads are covered with hats, advance to kill or be killed by a like number of their fellow-mortals covered with turbans. By this strange procedure they want, at best, to decide whether a tract of land to which none of them have any claim, shall belong to a certain man whom they call Sultan, or to another whom they call Czar; neither ever saw, or will see, the spot so furiously contended for: and very few of those creatures who thus mutually butcher each other ever beheld the animal for whom they cut each other's throats! From the time immemorial, this has been the way of mankind almost over all the earth.—What an excess of madness is this! and how deservedly might a Superior Being crush to atoms this earthly ball, the bloody nest of such ridiculous murderers!"

BALTIMORE MARKET.

Hogs.—The arrivals of Live Hogs at market this week have been larger than in any previous week this season. Fully 2500 head have come in from the west of which about 2000 have been taken by packers and butchers at prices ranging from $3,60 to $3.75 per 100 lbs. principally at about $3,62½. There are now about 500 head unsold which came in yesterday evening, and near 5000 head are expected to arrive during next week.

Killed Pork.—The receipts by wagons continue quite light, and prices are about the same at last week. Sales of some good parcels suitable for family use were made from store yesterday, at $3,75 per 100 lbs. and of some very prime at $3,87½.

Cotton.—We note sales this week of 215 bales Upland at 8 cts. and of 25 bales do. at 8¼ cts.

Cloverseed.—We quote the store price of fair to prime at $3,50a4.

Plaster.—A sale of a cargo at $3,12½ per ton.

Molasses.—At auction on Tuesday, 65 hhds. Porto Rico Molasses were sold at 17a18 cts.

Sugars.—At auction on Tuesday 50 hhds. Porto Rico were sold at $6,55a6,80; and 10 hhds. do at $5,45a6,50. A lot of 45 boxes damaged brown Cuba, was sold at $5,10. The stock of Muscovadoes is extremely small in first hands.

Tobacco.—The sales of Maryland Tobacco are moderate, but very fair for the season, the demand being confined principally to the better descriptions, of which the receipts are light. Small parcels of common qualities are also occasionally sold, but prices generally show no variation. We quote as before, viz. Inferior and common Maryland at $2,50a3,50; middling to good $4a6; good $6,50a8; and fine $8a12. Ground Leaf begins to come in freely, but is in very limited demand except for the finer qualities, worth $6a7. There is but little demand for Ohio, which we quote as follows:—Common to middling $3,50a4,50; good $5a6; fine red and wrappery $6,50 a10; fine yellow $7,50a10 and extra wrappery $11a13. We note sales of 20 to 30 hhds. Missouri Tobacco at $5,50a6,50. The inspections of the week are 320 hhds. Maryland; and 46 hhds. Ohio—total 366 hhds.

[The Missouri Tobacco noted above is quite a new article in this market, and we have no doubt that a considerable quantity will hereafter be annually sent to this city, instead of being taken to New Orleans.—The freight charged by the Ohio Rail road on Tobacco is at the lowest rate. The quality and appearance of this Tobacco are precisely similar to that of Virgina, and it may be used for the same purposes. It is dark, heavy and fat, and weighs about 1500 lbs. to the hogshead.]

Howard Street Flour.—Yesterday and to-day sales have been made at $4,12½a4,18¾, and holders are now generally asking $4.18¾, while buyers refuse to pay over $4.12½. The receipt price is unsettled, and we are not able to give a definite quotation.

City Mills Flour.—Holders to-day ask $4,37½, but is believed that purchases could be made under that price.

Susquehanna Flour.—Sales by the dray load at $4,18¾. No stock.

Rye Flour—Is worth $3,25 for 1st.

Wheat.—The return of comparatively mild weather, leading to the expectation that further supplies of breadstuffs may yet reach the market before the final close of navigation for the winter, has caused a decline in the prices of wheat. On Monday last some thousand bushels of Md. reds were sold at 85a92 cents for good to prime. Since then the parcels of this description which have reached the market have been sold 85a90 cents, and other sorts lower, as in quality. To-day several pracels of Penna. wheat which had been frozen up at Havre de Grace were released and came into market, and about 3200 bushels were sold at 92a93 cents.

Corn.—Early in the week sales of Md. white were made at 42a43 cents, and of yellow at 44a45 cents. Since then prices have declined a little, and to-day sales are making at 40a 41 cents for white, and 41a42 cents for yellow.

Rye—A sale of Penna Rye was made made to-day at 55 cents. We quote Md E. Shore Rye at 45a48 cents.

Oats.—Sales of Md at 23a24 cents, and to-day, occasionally at 25 cents. Sales of Virginia at 22 cents.

Liverpool, 18th Nov.—Since our Circular of 3d inst, by last steamer a fair extent of business has been done in Cotton and for a time the sellers had rather the advantage as to prices, but in the last few days holders have shewn a greatly increased desire to sell and supplied the demand so abundantly as to turn the scale in favor of buyers. The market has consequently become heavy and languid again and the rates of the 3rd inst, are realized with difficulty; indeed they are not attainable except in the middling qualities and all kinds are offered in quantity beyond the demand. The state of trade at Manchester is quite as favorable as at the date of our last and the business in both goods and yarns perhaps more extensive though at low prices.

The sales of the week ended 11th inst, were 32,820 bales, and for that ended this evening they amount to 27,780 bales, of the latter 5450 are Upland at 3 7-8a6¼, 8770 Orleans at 4a5¼, 5370 Alabama and Mobile at 3¾a5¾, and Sea Island at 8a15½d per lb. We quote Upland 3¾,5¾ and 6¼, fair5¼, Orleans 3¾a6¼ and 7, fair 5 3-8. Mobile 3 7-8a5¾, fair 6¼, and Alabama and Tennessee 3¼a5¼ per lb. The stock in this port is estimated at about 455,000 bales just as it was at the same period last season, the stock of American is about 260,000 being a decrease in that description of 30,000 bales.

Flour duty paid is dull at 26s-28s per bbl. the value in bond is uncertain. The demand for Tobacco has been good for ten days past, but confined chiefly to Virginia, which is rather higher.—The sales since 1st inst are estimated about 1100 hhds. of which 450 is Virginia leaf and 400 stemmed.

AGRICULTURAL MACHINERY,

Manufactured and for sale by A. G. MOTT & CO.
South east corner of Ensor and Forest sts. near the Bel-air market,
Old Town, Baltimore,

Being the only agents for this state, are still manufacturing WILEY'S PATENT DOUBLE POINTED COMPOSITION CAPT PLOUGH, which was so highly approved of at the recent Fair at Ellicott's Mills, and to which was awarded the palm of excellence at the Govanstown meeting over the $100 Premium Plough, Prouty's of Philadelphia, and Davis' of Baltimore, and which took the premium for several years at the Chester Co. Pa. fair—This plough is so constructed as to turn either end of the point when one wears dull—it is made of composition metal, warranted to stand stony or rocky land as well as steel wrought shares—in the wear of the mould board there is a piece of casting screwed on; by renewing this piece of metal, at the small expense of 25 or 50 cts. the mould board or plough will last as long as a half dozen of the ordinary ploughs. They are the most economical plough in use—We are told by numbers of the most eminent farmers in the state that they save the expense of $10 a year in each plough. Every farmer who has an eye to his own interest will do well by calling and examining for himself. We always keep on hand a supply of Ploughs and composition Castings—Price of a 1-horse Plough $5; for 2 or more horses, $10.

We also make to order other Ploughs of various kinds.

MOTT'S IMPROVED LARGE WHEAT FAN, which was so highly approved of at the recent Fair at Ellicott's Mills and at Govanstown, as good an article as there is in this country—prices from 22 to $25.

A CORN SHELLER that will shell as fast as two men will throw in, and leave scarcely a grain on the cob nor break a cob, by manual power; price $17.

CULTIVATORS with patent teeth, one of the best articles for the purpose in use, for cotton, corn and tobacco price $4, extra set of teeth 1.

HARROWS of 3 kinds, from 7 to $12.

GRAIN CRADLES of the best kind, $4.

HARVEST TOOLS, &c.

Thankful for past favors we shall endeavor to merit a continuance of the same. ja 26 tf

SOUTH DOWN SHEEP FOR SALE.

Two Rams and two Ewes of the purest South Down breed of Sheep. These Sheep were brought from England to Maryland in the autumn of 1840, by Dr. Macaulay, and the following testimonials will show the pedigree and exceeding purity of the blood.

The South Down Sheep were purchased for Dr. Macaulay of Baltimore, at the request of James Alexander Esq. of Somer Hill, England, by his agent, Mr. Thomas Waters of Stratford, Subcastle, Salisbury. They were part of the flock of Mr. Northeast, of Tedworth. Wiltshire. Mr. Waters in a letter to Dr. Macaulay, says, "I have much pleasure in informing you that I have selected a Ram for you which I consider of the purest South Down breed, and have this morning received a letter, from the same person I bought the Ram of, to say, he has selected six Ewes for me, from his own stock, also,—he is the first breeder we have in this part of the country, and probably in any other part of England, of the purest South Down Blood. The price of the Ram No. 16, is thirty guineas, and the six Ewes forty five shillings each, which I consider moderate."

The following is Mr. Northeast's letter to Mr. Waters, on the Pedigree of the Ram and Ewes purchased from him.

Tedworth, Sept. 14th, 1840.

My dear Sir.—I have this morning looked out for you six Ewes, which I think match well, and will please you. Four of them are six tooths and two are two tooths, and the Ram No. 16, will look like one of the family. No. 16 was bred from one of my best Ewes, and the Ewe having two, bred both up to weaning time. He was got by Mr. Ellman's No. 15, which was let this year by auction at sixty three guineas, and is considered the best sheep in England; he is now hired by Lord Huntingfield and Mr. Crips of Gedgrove.

For the last few years I have averaged my Ewes cull and best at 41s. 6d. that is, best at 42 and rest at 40s. each, and I trust you will not think I overcharge you by naming 45s. each, for the 6 best, as I shall expect to get about 42 for those left.

I remain, my dear sir, yours very truly,
THOMAS B. NORTHEAST.

Mr. Thomas Waters,
Stratford Sub-castle.

The Rams or Ewes will be sold seperate or together, at the wish of the purchasser. For a view of the sheep, or terms, apply to JACOB WOLFF, Esq. at this farm, adjoining Randalls town near the Liberty Road. Sep. 28.

AGRICULTURAL MACHINERY & IMPLEMENTS.

The subscriber begs leave to assure the public that he is prepared to execute orders for any of his agricultural or other machinery or implements with promptness. His machinery is so well known that it is unnecessary to describe the varions kinds, but merely annex names and prices:

Portable Saw Mill with 12 ft. carriage, and 24 ft. ways and 4 ft. saw,	$300
Extra saws for shingles, with 3 pair of head blocks,	125
Post Morticing Auger,	15
Bands,	10
Horse Power of great strength,	200
Corn and Cob Crusher, wt. 600 lb.	65
Thrashing Machine, wt. 300 lb.	75
Corn Planter, wt. 100 lb.	25
Thrashing Machine, wt. 600 lb.	150
Grist Mill, 2½ ft. cologne stones,	150
Do. 3 ft. do.	175
Belts for the same,	15
Post Auger, wt. 15 lbs.	5
Tobacco Press complete, portable,	85
Portable Steam Engine, with portable Saw Mill and cutting off Saw,	3500
Large Sawing and Planing Machine with cutting off saw, or cross cutting for arge establishments,	1100
If made of iron,	3000
Large Boring and Morticing machine for large establishments	150
Tenoning Machine	200
Vertical Saw	125
Small Morticing Machine, suitable for carpenters,	25

GEORGE PAGE,
West Baltimore street, Baltimore, Md.

BLOODED STOCK—GREAT BARGAIN.

A gentleman about leaving his farm, and being obliged to sell off his stock, offers for sale the following blooded animals, at the prices annexed:

Two full bred Devon Heifers, 3 yrs old next spring, and one 3-4 Durham and 1-4 Devon do. 2 yrs old, very handsome animals, and guaranteed as represented—one of the first has a heifer calf by her side, the others are in calf by a full bred Devon bull—the lot including the three heifers and calf, will be sold for $100. A Devon bull of the age of the younger of the three heifers, can be sold if desired, at the same rate.

Also a full bred Berkshire Sow, about 12 months old—an imported China Sow, 2 to 3 yrs old, and a breeding Sow, mostly of the Chester Co. breed, all in pig by a full bred Berkshire Boar—price for the whole lot, $35.

Also a lot of beautiful White Turkeys, (4 in number) so much admired for gentlemen's lawns, $10. Apply to

SAMUEL SANDS,

de 14 Office of the Amer. Farmer, Baltimore, Md.

National Intelligencer, publish three times.

ISABELLA GRAPE VINES,

Of proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, near Sing Sing, N. Y are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, [provided their locality is not too far North] All communications, post paid, addressed to R. T. Underhill, M. D, No. 400 Broadway, New York, will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grapevines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern States.

dec. 7 4t$3

IMPORTED DURHAM BULL FOR SALE.

He was selected in England by Col. J. H. Powell as an animal of the *best blood* to be procured, is owned by a Company in a neighboring State, and is only parted with on account of making a cross with his get; he is 5 years old and will be sold a bargain.

Also some very fine Durhams of all ages, at a rate to *suit the times*. Apply to no 30 SANDS.

SAXONY EWES.

A flock of 50 or 60 Saxony Ewes, of the very finest quality, bred by one of the most eminent breeders in Maryland, (and whose name alone is a sufficient guarentee of his stock being the best,) is offered for sale, in lots or to suit purchasers, at $4 per head. Apply to,

Nov. 23. SAMUEL SANDS.

MARTINEAU'S IRON HORSE-POWER

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware, and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans, Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shorest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment

R. B. CHENOWETH,

corner of Front & Ploughman sts. near Baltimore st. Bridge, or No. 20 Pratt street. Baltimore, mar 31, 1841

MILLWRIGHTING, PATTERN & MACHINE MAKING

By the subscriber, York, near Light st. Baltimore, who is prepared to execute orders in the above branches of business at the shortest notice, and warrants all mills, &c. planned and executed by him to operate well.

Murray's Corn and Cob Crushers for hand power	$25
Do. by horse power, from 6 to 12 bushels per hour,	35to40
Corn Shellers, shelling from 30 to 300 bushels an hour,	15to75
Portable and Stationary Horse Powers	75to150
Self-sharpening hand Mills, a superior article,	12 to 20
Cylinder Straw and Oat cutters, 2 knives,	20a35
Mill, carry log, and other Screws, 2 small Steam Engines 3 to 4 horse power. Any other machines built to order.	

Patent rights for sale for the Endless Carriage for gang Saw Mills, a good invention.

☞Orders for crushers can be left with any of the following agents: Thos. Denny, Seedsman, Baltimore; J. F Callan, Washington, D. C; Calvin Wing, Norfolk; S. Sands, Farmer office; or the subscriber, JAS. MURRAY, Millwright, Baltimore.

may 28 1y

CORN SHELLERS, CRUSHERS, STRAW CUTTERS, &c. &c.

☞*Prices reduced in proportion to the present rate of labour and materials.*-£)

The *subscribers* offer for Sale, *Goldsborough's Corn Sheller* and *Husking Machine*,—warranted to shell or husk and shell 700 bushels of Corn per day by the power of two Horses.

Baldwin's Corn Sheller with *blower* attached.—This machine with the power of two horses will shell and clean ready for market 400 bushels of corn per day.

Baldwin's Corn & Cob Crusher,—warranted to grind 25 or 30 bushels of Corn & Cob per hour, and put in fine order for feeding stock. This is the most durable, simple in construction, and most powerful of any Crusher made in this Country, and best adapted for extensive farming establishments. The power of two horses is required to drive it.

Straw Cutters, Cylindrical Improved.—There are four sizes of these machines, which combine all the late impravements;—400 to 2000 bushels of hay, straw, cornstalks, &c. can be cut by them per day Also, common Treadle, Evans' patent, and several other kinds STRAW CUTTERS, at low prices.

IN STORE,

Horse Powers, 2 sizes	Harrows, 5 kinds
Threshing Machines, do	Rollers and Drill Machines
Vegetable Cutters	Yankee Ox Yokes
Fanning Mills, 2 sizes	Harvest Tools, all kinds
Churns, 3 sizes	Post hole Augurs
Lime Spreaders	PLOUGHS, 25 sorts, embracing
Grindstones, hung on friction rollers	the Subsoil, and several other kinds of late introduction

Garden and Field SEEDS, a large and general assortment

TREES and PLANTS do do

CATALOGUES of the abeve furnished gratis, giving prices and description of each machine—also directions for planting seeds, trees, &c.

R. SINCLAIR, jr. and CO.

no 30 Manufacturers & Seedsmen, 60 Light st.

HUSSEY'S REAPING MACHINE.

Farmers are respectfully requested to send their orders as soon as they shall have decided on procuring machines to cut the next year's crop: by doing so, they will enable the subscriber to make preparations early in year with confidence, so that none may be disappointed at harvest time, as has been the case for several years past by delaying to apply for them in season. His former practice will be steadily adhered to of making no more machines than are ordered, lest a failure of the next years crop should leave a large number on his hands, unsold, which his circumstances will not allow. It is hoped that the great success which has attended the machines made for the last harvest will remove every doubt of their great value. Several persons have cut as high as 20 acres in a day with the last improved machines, while one gentleman with one of the old machines cut his entire crop of 72 acres in less than five days, without having a cradle in the field.

The greatest objection ever made to the machine was its heavy bearing on the shaft horse; this has been entirely removed by adding a pair of forward wheels to support the front of the machine, and a driver's seat at an extra expense of 20 dollars.

The subscriber's Corn & Cob crusher which obtained the first premium over several competitors at the late Fair of the N. York State Agricultural Society held at Albany, N. Y. and is so highly recommended in the public prints, by farmers who have used them, will be kept constantly on hand for sale.

no 9 OBED HUSSEY

BENTLEY'S AGRICLTURAL STEAM GENERATOR MANUFACTURED BY BENTLEY, RANDALL & Co.,

Manufacturers of *Bentley's Convoluted Steam Boilers*, Baltimore, Md. for steaming Corn Stalks, Hay, Potatoes, Boiling water, &c. It is also highly recommended to Tanners for steaming Leaches, also for various manufacturing and mechanical purposes, where steam or large quantities of hot water is required. This article is made wholly of iron, and was got up expressly to meet the wants of the Agricultural community, and it is confidently believed that for simplicity, durability, economy in money, fuel, time, and room combined its equal has not been offered to the public. It possesses all the pinciples of the most approved Tubular Locomotive Boilers, for saving of fuel, while the construction is such that one of equal size, strength and durability that has heretofore cost $100, or more, is now offered at $45. It is operated equally well with Anthracite coal as with wood, and can be removed by two persons at pleasure.—Prices No. 1 $45, considered of capacity enough for ordinary Farm purposes; No. 2 $60, No. 3 $75.

BENTLEY, RANDALL & Co.

McCausland's Brewery, Holliday, st. near Pleasant.

We have the liberty of referring to the following gentlemen, viz:—David Barnum, Esq City Hotel; Captain Jackson, warden of the Maryland Penitentiary, and Doct. Robt Dorsey of Edw., where they can be seen in operation.

Agents, J. F. Callan, Esq. Washington City; Capt. John Brooks, Upper Marlboro', Prince Georges' Co. Md. where samples can be seen. For numerous testimonials in favor of the above call on the manufacturers or their agents.

N. B. B. R. & Co., are also agents for Murray's Corn and Cob Crushers. Balto. Md., Dec. 1842.

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LIME—LIME.

The subscriber is prepared to furnish any quantity of Oyster Shell or Stone Lime of a very superior quality at short notice at their Kilns at Spring Garden, near the foot of Eutaw street, Baltimore, and upon as good terms as can be had at any other establishment in the State.

He invites the attention of farmers and those interested in the use of the article, and would be pleased to communicate any information either verbally by or letter. The Kilns being situated immediately upon the water, vessels can be loaded very expeditiously. N.B. Wood received in payment at market price.

ap. 22 3m E. J. COOPER.

AGRICULTURAL CHEMISTRY.

The subscriber offers his services to the Agriculturists of the State, for the purpose of examining and analyzing their soils, advising the different kinds of manure, compost, and quantity and condition of lime to be used, the forming of compost of the material found on the land, with such other information as may present itself after the examination.

The charges will be in proportion to the time required for travelling and examination.

The different kinds of salts required in forming the different kinds of manure, with direction for its use, can be furnished, so as to enable the agriculturist to supply himself with the quantity of manure he may require in a few days, and at half the cost in making it in the stable yard.

The subscriber intends delivering a course of Lectures, as connected with Agriculture and the Arts. The instruction will be given first by Lectures, after which questions will be asked and experiments will be made by each individual, so that the subject can be understood either by hearing, seeing, tasting, smelling or feeling, which will bring the science within the reach of every individual.

The Lectures will commence on Monday, the 5th of December, at No. 53, Sharp street, near Pratt st. All letters post paid addressed to the subscriber, corner of Pratt and Sharp sts. will meet with attention. Individuals can receive private instruction. Terms for instruction will be from Three to Ten Dollars.

Nov. 23. WM. BAER.

BARNABY & MOOERS' PATENT SIDE-HILL & LEVEL LAND PLOUGH.

To which was been awarded the following and Several other Premiums, viz.—By the American Institute, at their Ploughing-Match at Newark, N. J. 1842, the First Premium, a Silver Cup,—and at their Annual Ploughing-Match for 1841, at Sing Sing, N.Y. a Gold Medal for the best work done, lightest draught, and best principle of construction.—answering for "general purposes." The N. York State Agricultural Society, awarded it an Extra Premium of $50, at their Annual Ploughing-Match at Syracuse for 1841.

The following are its advantages over the Common Plough, viz.—1st. Ease of Draught—2d. Perfection of Work—3d. Strength and Durability—4th. All Dead Furrows may be prevented, as the Furrows can all be turned one way—5th. Any width of Furrows may be turned, between 8 18 inches, by moving the catches in the cross-piece towards the handles for a wide Furrow,—and towards the centre for a narrow one—6th. Placing the beam in the centre of the cross-piece, makes it a "Double Mould-Board Plough," turning a Furrow both ways at the same time,—answering for Green-Ridging, Ploughing between Corn and Potatoes, or any any crop cultivated in rows or drills,—and for Digging Potatoes.

The subscribers having purchased the Right to Manufacture the above celebrated Ploughs, for the State of Maryland, are now prepared to furnish Farmers with the same,—and they pledge themselves to the Public, to manufacture this Plough in the Very Best Manner, both as to materials and workmanship. ☞All Orders will be thankfully received and punctually attended to.

☞Price as Follows, (adding Transportation.)—No. 2, 45lb. at $7. No. 3, wt. 70 lbs. $10—No. 4, 80 lbs. $11—No. 5, 90 lbs. $12. Extra edge, 50 Cents. For Colter, if added, laid with steel, $1.50. Wheel, $1,50. Shin Pieces, 12½ Cents.

DENMEADS & DANIELS, corner Monument and North-sts. who having purchased Mott & Co's interest, are now sole owners.

B. H. WILSON, No. 52, Calvert st. 1 door below Lombard, is Agent for the sale of the above Plough. Baltimore, Nov 23, 1842

EASTMAN'S NEWLY INVENTED PLOUGH WITH CONCAVE LANDSIDE, AND DOUBLE SHARE.

The subscriber has just invented a PLOUGH, with the above named peculiarities, viz: *with a concave Landside and double share.* The advantages to be derived from these improvements are expected to be as follows:—1st, That it will be kept in repair at considerable less expense than other Ploughs in use:—2d, That it will run more level either in deep or shallow ploughing:—3d, He believes that it will run much lighter to man and horses than any other Plough in use. With these advantages they are offered to the public, and if they are not realized to the purchasers after two days use, or they are not satisfied with them, they are requested to return them and receive their money back. The only size I can furnish at present is a large two horse Plough, the size of the Davis' 10 inch, as made by me. J. S. EASTMAN,

Pratt street, between Charles and Hanover sts.

THE SUBSCRIBER,

Who exhibited the Corn and Cob Crusher and Grinder at the Agricultural meeting, having rented the Wheelwright & Blacksmith shop with the water power attached in the village of Franklin, will continue to build his Corn and Cob Crushers and Grinders, and has so improved them that persons who have not got horse powers can use them by hand power with sufficient facility to supply the wants of small farms, and with one or two horse powers can do more work than any other machine for the same purpose that will require double the power. This is not puffing, for it can be and has been made manifest. The price of the crusher is $40.

He is also prepared to do all kinds of repairing to Agricultural or any or other kind of machinery at the shortest notice.

Horse-shoeing and blacksmith work in general, done in the neatest and strongest manner, all of which he warrants to be good.

Orders for any of the above machines can be left with Mr. Sands at the office of the American Farmer, or with the subscriber.

au 24 WM. MURRAY, Franklin, Balt. co. Md.

DEVON CATTLE.

The undersigned has a herd of about five and twenty full blood North Devon Cattle, embracing all ages and both sexes, which have been selected and bred with care for several years past, and being overstocked would dispose of a part of them. Orders for any of them will meet with attention. Address

JOHN P. E. STANLEY,

No. 50 S. Calvert St. Baltimore.

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